

Inventors: Ross  
Serial No. 09/839,600

**PATENT APPLICATION**  
Attorney Docket No.: 76,736

### ABSTRACT

A method for digital preemphasis high fidelity reconstruction of an original pulse code modulation (PCM) serial stream binary data signal which has suffered degradation of fidelity, and consequent increase in bit-error-rate, during transmission on a single channel from a transmitter to a receiver. Prior to transmission, amplitude encoded digital pre-emphasis of each bit of the original binary data signal to be transmitted mitigates or remedies the signal degrading frequency dependent losses concomitant with the signal transfer network characteristics of the fixed transmission line. Subsequently, the amplitude encoded signal is transmitted to the receiver connected to the other end of the fixed transmission line. Compared to a conventional transmitter, transmission line, and receiver system, the end result of amplitude encoded pre-emphasis is superior reconstructed fidelity and quality of the PCM waveform, i.e. lower bit-error-rate, at the output of the receiver for the same length of transmission line.